Hawaii's problems and

many assets. The primitive, self-sufficient economy that Captain Cook found in 1778 has undergone many changes. Hawaii now exports about 280 million dollars' worth of sugar, pineapples, coffee, tropical flowers, canned fish, and other products. The population has grown apace. So has pressure on the land. The people and the Territorial Legislature have taken steps to assure the best possible use of their land heritage. By *Perry F. Philipp*, agricultural economist, University of Hawaii.

THE USE and ownership of land in Hawaii and in the continental United States differ from each other in many ways because of differences in location, climate, and history.

The eight major islands of Hawaii lie entirely in the Tropics. Honolulu, the largest city, is 2,100 nautical miles from San Francisco, the nearest Mainland harbor. The people of Hawaii refer to the continental United States as the Mainland.

The Islands are of volcanic origin. Large parts of the interior of all of them consist of rugged, mountainous terrain. The two highest peaks are close to 14 thousand feet above sea level. Plateaus, coastal plains, and the lower mountain slopes, although they comprise a small part of the total area, are the most important lands.

The climate is mild. Temperatures change little between summer and winter in most of the inhabited parts. The average annual rainfall in agricultural areas varies from 200 inches to less than 20 inches within a few miles, mostly because of topographic influences. The range from the tropical to the desert and from sea level to high altitudes permits the production of a great variety of agricultural products.

The land area of the Hawaiian Islands is 4.1 million acres, or 0.2 percent of the land area of the Mainland. Less

than 8 percent of the total land area is used for crops, about 25 percent is grazed, and 29 percent is forest or woodland. (All figures I give are for 1956, unless otherwise stated.)

The remaining land, more than a third of the total land area, is used for purposes other than agriculture and forests. It includes special-use areas such as cities and towns, roads, parks, and military areas and wasteland, such as bare lava flows and gulches.

When Captain James Cook discovered the Hawaiian Islands in 1778, he found a primitive, self-sufficient economy based mainly on fishing and small farms held under feudal tenure. Hawaii today has a highly developed trading economy, heavily dependent on the Mainland. Its agricultural exports amount to more than a quarter of a billion dollars.

The oldest and largest agricultural industry in the Islands is growing and processing sugarcane. Sugarcane was indigenous to Hawaii at the time of its discovery, but production had reached only 2 tons a year in 1837. The value of 1,100,000 tons of raw sugar, together with molasses and other byproducts, amounted to 148 million dollars in 1956. About 221 thousand acres were in cane.

Most of the land in sugarcane consists of what used to be forested areas,

semiarid pasturelands, or uscless arid areas. The sugarcane acreage is in low-land tracts. Attempts to grow cane at levels above 2,500 feet are seldom made. Some land has been planted to cane almost continuously for more than a century, yet with heavy fertilization and good soil management, these lands are at least as fertile today as when sugar culture began.

It takes about a ton of water to produce a pound of sugar. Slightly more than half of the cane area is irrigated; it produces a little less than two-thirds of the total sugar. The rest of the sugarcane is grown on the wet windward sides of the Islands and depends on rainfall.

The unit of organization in the sugar industry is the plantation, which grows the cane and manufactures it into raw sugar. A steady decline in the number of plantations has been offset by a corresponding increase in their size.

Twenty-seven plantations were in operation in 1957; the average area planted to sugarcane per plantation was 8,200 acres. The largest plantation had 27,700 acres in cane. The smallest had 600 acres. Plantation operations were geared to year-round employment for the 17 thousand employees in the industry.

A plantation consists of the land controlled by the company, the sugar mill, shops and central offices, a road system, and the plantation town and housing areas for plantation employees. About 70 percent of the plantation employees and their families lived in plantation-owned homes in 1957. The plantation town often is a self-contained community. It usually has a business district with stores, a school, churches, a theater, a recreation field and gymnasium, a hospital, and public services and utilities.

Besides the land used for growing sugarcane, many sugar companies hold considerable acreages of nonarable land, which is used mainly for water conservation or grazing.

Approximately 1,300 small growers raise sugarcane on about 9 percent of

the total sugarcane acreage. A majority of these operate independently and sell their sugarcane under government-approved contracts to the plantations.

PINEAPPLE PRODUCTION, primarily for canned fruit and juice, is the Islands' second major agricultural industry. The annual output of processed products is valued at 117 million dollars. The acreage in pineapples increased from 5 thousand acres in 1909 to 77 thousand in 1956. The fruit is grown at altitudes ranging from near sea level to about 2 thousand feet.

The most productive pincapple lands have a rainfall of 25 to 60 inches of rain a year. Areas with less rain are usually too arid unless irrigation water is applied. More rain may adversely affect yield and quality. Pineapple production makes it possible to use many areas too dry for most other crops.

The pineapple industry, like the sugar industry, has developed in the direction of large-scale, integrated plantations. Nine pineapple companies operate 13 plantations and 9 canneries. A minor part of the crop is raised on about 120 small, nonplantation farms, most of which have contracts with canneries. The pineapple industry provides employment for about 22 thousand persons during the peak summer canning season and year-round employment for more than 9 thousand.

Crops other than sugar and pineapple, called diversified crops in Hawaii, occupy 16 thousand acres—5 percent of the total cropland in the Islands. Their wholesale value, however, is high—about 13 million dollars.

Coffee, the largest of the diversified crops, is grown on nearly 6 thousand acres. About 1 thousand small farmers operate groves, which usually are 5 to 10 acres in size. They are mainly in the Kona district of the Island of Hawaii. The coffee is grown at elevations of 800 to 2,200 feet on steep, rocky, and stony slopes. The soil is productive. The climate is excellent for coffee. The yield is high. Kona coffee is highly regarded

and is shipped chiefly to the Mainland.

The area planted to macadamia nuts, which are confectionery nuts of excellent quality, has almost tripled since the war. It amounted to about 2,800 acres in 1956. The nuts are planted mostly in tracts previously used for grazing or forest. Hawaii is apparently the only place where macadamia nuts are grown commercially on a sizable scale.

For Island consumption, Hawaiian farmers grow many western vegetables, such as cabbage, tomatoes, and cucumbers, and such Oriental vegetables as burdock, daikon, and watercress. The limited size of the Hawaiian market means that most production is on small fields. This, together with many insects and diseases and high requirements of fertilizer and irrigation, make production costs high.

Papayas, bananas, and passion fruit are the most important of the commercially grown fruits. The rest are mainly avocados, citrus fruits, mangos, guavas, and lychee. Most vegetable and fruit farms are family operated. Only a few are larger than family size. The area in commercially grown fruits and vegetables is about 6 thousand acres.

Taro is the plant from which poi, the Hawaiians' staff of life, is made. The area in taro is about 600 acres, only a fraction of the taro acreage at the time Hawaii was discovered. A decline in the number of Hawaiians and the competition of cheaper starchy foods caused this drop.

Rice, once second in importance and area only to sugar, occupies 200 acres or less. Development of the large-scale mechanized rice industry in California doomed the Hawaiian industry, the mechanization of which is limited by the small size of the paddies.

The growth of air transportation in the postwar period helped Island growers to develop a million-dollar export of floral products, primarily tropical foliage, orchids, and anthuriums. They also produce commercially many other floral products, mainly for the flower-loving Islands. Farmers use an estimated 600 acres for flowers.

Many other crops—cotton, wheat, tobacco, rubber, silk, and sisal—have been tried commercially in Hawaii but have proved economically unsound.

LIVESTOCK PRODUCTS are valued at 27 million dollars annually. Most of Hawaii's grasslands are used for cattle and a few sheep.

At least three-fourths of all beef cattle, numbering about 160 thousand head, are raised on large ranches, many of which extend from dry low-land to wet upland zones. The best pastures in the zones of moderate rainfall are set aside for grass fattening. The less productive areas and the wetter rangelands are used mainly for breeding animals and young stock. Most of the small ranches are in areas of moderate rainfall in which there is year-round grazing.

Keeping plant pests from overrunning pastures is a major job of the ranchers. To control brush and weeds, they use some of the largest bulldozers known, which pull big anchor chains or disks. Herbicides also are used.

Locally produced milk amounts to 47 million quarts annually, compared to 2 million quarts in 1900. It is mainly consumed as fluid milk. Most cows on the 89 dairies of the Islands are in large herds. Twenty-seven dairymen keep more than 150 cows each and eight keep more than 300 cows. Corporations own several large dairies.

Most of the dairymen operate on the Island of Oahu (on which Honolulu lies) to supply the city market. They usually keep their cows in feedlots and use their limited arable lands for growing soilage crops. They prefer Napiergrass for this purpose, because it yields 100 to 150 tons of green feed an acre. Some dairymen on the Islands other than Oahu pasture their milking cows, but few on Oahu can afford to use their small holdings so extensively. Except for molasses and pineapple bran and pulp, almost all concentrate feeds have to be brought from the Mainland.

Swine producers sell 70 thousand

hogs a year for slaughter. They raise their animals in concrete or wooden pens. They feed them garbage, imported grain, and rations compounded of local feedstuffs.

Poultry farmers raise about 1 million chickens mainly on feed imported from the Mainland and usually keep them in wire-floored houses off the ground. Typical Hawaiian poultry and swine farms are small in land area and operated by the farm family.

Hawaiian farmers expect to expand their output only slowly from now on. Sugar exports to the Mainland—Hawaii's main export market—are limited by Federal law. Sugar planters expect no substantial increases in the near future. The production and export of pineapples will depend on the competition of other domestic fruits and juices and of foreign and Puerto Rican pineapple producers.

Exports of other agricultural products are small, although exports of tropical fruit and nut products have a large growth potential. Farmers have increased their production for Island use in the postwar period at the average rate of about 1.5 million dollars a year. They may increase production further if Hawaii's population continues to grow and if they can compete with the prices and quality of Mainland food imports.

Large-scale farms are more important in Hawaii than on the Mainland. According to the 1950 United States Census, farms with annual sales of 25 thousand dollars or more each made 91 percent of all farm sales in Hawaii but only 26 percent of all farm sales on the Mainland.

Many large farms in Hawaii are highly mechanized and efficient. Labor shortages during the Second World War and unionization of workers in the processing plants and in the fields brought much higher wages and shorter hours. Average daily earnings for nonsupervisory sugarworkers on plantations increased from 1.70 dollars in 1935 to 11.20 dollars in 1957.

These are cash wages; the 1935 figure does not include substantial perquisites, such as free housing, medical care, fuel, light, and water.

Operators of plantations and other large farms have been trying to offset higher labor costs by more mechanization, laborsaving practices, and higher yields per acre. In the sugar industry, for example, the labor force was cut more than two-thirds, but output per worker more than tripled since 1932. The sugar tonnage per acre increased 50 percent at the same time.

Farmers selling from 2,500 to 25 thousand dollars' worth of agricultural products a year made only 7 percent of all farm sales in Hawaii, compared to 62 percent on the Mainland. These farmers nevertheless are important in Hawaii; they are the backbone of most of the diversified agricultural industries. Their productivity has increased greatly since the war.

Two-thirds of all Hawaiian farmers, 3,750 in number, sold only 2 percent of all agricultural products. Some of them are marginal full-time farmers; their number has been declining. Most farmers in this group are parttime or residential farmers, who derive most of their income from occupations other than farming. Their number increased several times between 1940 and 1950.

In view of the shortening workweek and the increasing urbanization in Hawaii, this trend toward part-time and residential farms probably is a healthy one. It can help to reduce the tendency toward overcrowding into thickly populated areas and offers the family a healthy outdoor life and some economic return.

Managers are the most important type of farm operator in Hawaii. They run the plantations and many large ranches and other large agricultural enterprises. According to the 1950 census, there were only 109 managers, or fewer than 2 percent of all farm operators, but they controlled 78 percent of Hawaii's agricultural land and

an even larger share of all the cropland.

Full and part owners amounted to 40 percent of all operators. They used 20 percent of the agricultural land. About 58 percent of the operators were tenants, but they used less than 2 percent of the agricultural land.

Farmers in Hawaii are highly specialized, and many produce only one type of product, such as sugarcane or milk or pork. They become so efficient in producing their specialties that it often does not even pay them to raise their own food for home use.

The numerical importance and status in agriculture of the several races represented in Hawaii vary greatly—depending largely on the time of their arrival in the Islands, their experience, and their traditions in their countries of origin.

The Filipinos were the latest racial group to come to Hawaii. They constitute the largest part of the hired labor force in agriculture and are beginning to establish themselves as tenant farmers, especially as coffee farmers.

The Japanese, second to the last to arrive, are the second largest racial group among plantation workers. Most of the small farmers are of Japanese ancestry.

The Chinese were the earliest immigrants of Oriental origin. They once constituted a large group of plantation workers and farmers, particularly rice growers, but most of them have left agriculture.

Caucasians own or manage many of the large agricultural enterprises. Hawaiians and part-Hawaiians operate some ranches or work on them. They also produce some crops, and a few come close to subsistence farming.

Island farmers, like Mainland farmers, operate within an extensive system of laws and regulations. Regulating authorities include Federal, Territorial, and county agencies.

Public and private agricultural experiment stations do extensive research. The University of Hawaii and the public schools offer courses and training in agriculture. Commercial banks furnish credit for large-scale agricultural enterprises and small sugarcane producers. Other small farmers, however, obtain most of their capital from the Farmers Home Administration or from their families and friends. Dealers also sometimes carry their accounts for feed, fertilizer, and other supplies.

Farmers owning land, like all other private landowners, pay a Territorial tax on real property. The tax is based on the assessed value of the land and its improvements. A part of the assessed value of an owned home is tax exempt to encourage homeownership. Agricultural land bears the same tax rate as urban property.

IRRIGATION has long been important in Hawaiian agriculture. The old Hawaiians used efficient methods of irrigation. They brought water through ditches to their taro fields from streams that often were far away. Sugar planters built large-scale irrigation systems. The East Maui ditch system, for example, has a capacity of more than 500 cubic feet a second. Subterranean water resources have been developed by large-scale pumping.

Development of irrigation water in Hawaii has been made almost entirely with private capital. In 1953 the Territorial Legislature created an agency now called the Hawaii Water Authority and provided it with public funds for the further development of the water resources of the Islands.

In 1950, 117 thousand acres were irrigated according to the United States Census. By far the largest part of it was in sugarcane. Most of the rest was in diversified crops. An increasing acreage of pineapple fields and pastures is irrigated in the drier sections.

Soil erosion is a serious problem in Hawaii because of steep slopes and heavy rainfall on some of the farmlands. Conservation of water is vital in many areas.

Farmers and ranchers, assisted by Federal and local agencies, have given soil and water conservation increasing attention. The Territorial Legislature adopted an enabling act in 1947 for the creation of soil conservation districts. Such districts had been established in many areas by 1958.

Territorial forest and water reserve zones cover about 30 percent of the total area of the Islands, or 1.2 million acres. More than two-thirds of the reserve zones are public land. The rest is privately owned. Their primary purpose is to provide plant cover that will prevent rapid runoff and erosion.

A growing trend is to put forest and water reserve zones to such multiple uses as game management, public hunting, hiking, and other recreational purposes. Large areas are used for

military training.

Many species of commercial timber can be grown successfully in Hawaii, but the timber industry is still in its infancy. The value of all forest products sold in 1949 was less than 50 thousand dollars. Both the Government and private landowners are interested in the better utilization of forest timber resources, and timber research has been initiated.

About 250 thousand acres have been set aside for recreational use. The Hawaii National Park contains 231 thousand acres. Its larger section, on the Island of Hawaii, includes the active volcanoes Mauna Loa and Kilauea and surrounding areas. Its smaller section, on the Island of Maui, covers mainly the vast crater of Haleakala, an extinct volcano. All major islands have a number of Territorial and city and county parks and playgrounds. Beaches, which are public to the high watermark, are another important recreational asset of Hawaii.

THE ONLY MINERAL RESOURCES used commercially at present are rock, limestone, and sand. The possibility of economical development of other mineral deposits, primarily bauxite, is being investigated.

Surveys and classifications of land resources of the Territory have been made for various purposes. A detailed soil survey of the Territory was published in 1955. The Soil Conservation Service has classified the capabilities of land for agricultural uses in many areas. A comprehensive economic classification and study program of Hawaii's lands at the University of Hawaii was initiated by the Territorial Legislature in 1957.

The pattern of land tenure in Hawaii is largely the result of the land division in the 1840's and 1850's (called the Great Mahele), the development of large-scale agricultural enterprises, and the largely unsuccessful policy of homesteading a part of the public domain. In Old Hawaii, all land belonged to the king, who distributed it to his principal chiefs on a feudal basis. They in turn allotted the land to lesser chiefs, who subdivided it among the common people.

The landholding system changed during the Great Mahele. The king divided the land among the chiefs, the Government, and common people, and kept some for himself. The king's own property, or crown land, amounted to somewhat less than 1 million acres; the Government land, about 1.5 million acres; the chiefs', a little more than

little less than 30 thousand acres. The farms given to the common people, however, consisted primarily of irrigated taro lands, which were regarded as the most valuable lands at that time.

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Much of the land soon passed into the hands of non-Hawaiians (particularly sugar planters and cattle ranchers) by sale, lease, or marriage. Fifty-seven percent of the taxable land belonged to them by 1896. Title to all Government and crown land was conveyed to the United States by the act of annexation in 1898. Agencies of the Territorial Government have continued to manage most of the public lands, however.

Public land amounted to about 42 percent and private land to 58 percent of all land in the Islands in 1956. Of

the Government-owned land, 1,250 thousand acres were Territorial; 10 thousand acres were county lands; 170 thousand acres belonged to the Hawaiian Homes Commission; and 320 thousand acres were Federal land.

The Territorial Department of the Tax Commissioner set the market value of all lands in the Territory at 1.4 billion dollars in 1956. Private landholders owned 70 percent of it, and public land accounted for 30 percent.

The most valuable part of the public land was held by the Armed Forces. Much of the Territorial public land is poor. More than 800 thousand acres are in forest and water reserve zones. Most of the rest is leased out for agricultural purposes, mainly for grazing.

The Hawaiian Homes Commission land was set aside by an act of the Congress in 1920. The act provides for granting land to persons of not less than half Hawaiian blood for homesteads, farms, or pastures under 99year leases at the nominal rent of I dollar a year. Hawaiian Homes Commission land includes areas in or near the major cities, some valuable agricultural land, and some poor land. Most of the residents of Hawaiian Homes Commission settlements are city oriented, rather than the men of the soil apparently contemplated by the framers of the act.

A few trusts, corporations, and individuals hold most of the private lands.

The 11 largest landowners in 1956 owned 50 percent of all private lands in the Islands, and the 60 largest owned 80 percent.

About half of the agricultural land is owned by the farmers and plantations who use it, and one-half is leased by them. The ratio between owned and leased land, however, varies from industry to industry. For example, sugar plantations own about 60 percent of the cane land, ranchers about half of the pastures, and coffee growers about a fourth of the orchards, which they operate.

In view of the large amount of leased land, good leasing practices are essen-

tial. Farmland usually is rented for cash. Only about 10 percent of all rental agreements are on a share basis.

Public leases are for up to 15 years for cropland and up to 21 years for pastureland that cannot be irrigated. Private grazing, sugar, and pineapple leases for large areas often run for 20 years—some for more than 40 years. Small farmers in diversified agriculture often have to be content with shorter leases and sometimes with only oral leases of a year or less.

Lessees of both private and public agricultural lands ordinarily do not get any credit for improvements they make on the leased property. Removal of these improvements, while not allowed in most old rental agreements, may be permitted in new ones at the expiration of the lease.

The LAWS GOVERNING WATER rights in Hawaii with respect to surface waters appear to be unique in the United States. In general, the owner of land has the right to the surface water that originates on his land, subject to rights that may be vested in others by ancient usage or deed.

The law is vague on ground water except for artesian waters—that is, subterranean waters confined under pressure. According to one court decision, all owners of land over an artesian basin have a common right to the reasonable use of the artesian water.

Title to surface water is held by both private owners and by the Government. Like land, the control of water resources is highly concentrated. On the larger Islands, except for a few public departments, irrigation water is controlled largely by sugar and pineapple plantations or private water companies closely connected with the sugar-growing interests.

Two methods of Land registration exist in Hawaii, the regular system and the land court system.

Under the regular system, the owner has a merchantable, fee-simple, recorded title.

A land court title is considered better than a regular title, because the titleholder is insured with the Territory against losses resulting from a faulty title. About 40 percent of all lands on Oahu and about 8 percent of all lands on other Islands have such titles.

The metes and bounds system is the principal means of measuring land in Hawaii. A land court title to any subdivided piece of land is always conveyed by block and lot number.

The population of the Islands, including military personnel, has grown from 368 thousand in 1930 to more

than 600 thousand in 1958.

The importance of agriculture as a source of employment has declined greatly. About one in three gainfully employed persons worked on farms in 1939; in 1955, only about one in nine. Most people not employed in agriculture moved to the cities, mainly Honolulu, to work for the Armed Forces, or in the tourist industry, nonagricultural industries, trades and services.

The population of the "city" Honolulu—the urbanized area on the leeward side of Oahu—rose from some 20 thousand in 1890 to 138 thousand in 1930 and 302 thousand in January 1958. Express highways were built to bring all parts of Oahu within commuting distance of the center of Honolulu. The population of Oahu outside the "city" of Honolulu increased by 32 percent between January 1955 and January 1958.

Oahu, with 9 percent of the total land area, had 76 percent of the civilian population of the Territory in January 1958. With 735 persons to the square mile, its population density

exceeded that of Japan.

A major military base is maintained because of the Islands' strategic location. Almost all of the defense installations are on Oahu.

The military area amounts to almost 15 percent of the land area of Oahu.

THE MAJOR PROBLEM of land use on Oahu is to develop additional residential and industrial areas but to retain enough land for agricultural production and for military and recreational

purposes.

About 43 percent of Oahu in 1956 was forest and water reserve zones or was unimproved; 31 percent was agricultural land; and 10 percent was in urban use. At the 1957 rate of population growth, additional urban development would require about 1.7 square miles more land each year. At that rate, by 1980, the urban area would amount to 17 percent of the land area of the Island.

Most of the urban expansion can be expected to take place on the rather flat lands, which have been used for crops. Accordingly, nearly half of Oahu's lands with slopes of less than 10

percent may be urban by 1980.

In the development of additional residential and industrial areas, the scenic beauty of the Island should not be sacrificed. Tourism is Hawaii's fastest growing industry, and Oahu is its center. More than 160 thousand visitors came to the Islands in 1957. Oahu's appeal to tourists may decline greatly unless foresight is used in land

development.

Land available for fee-simple purchase in the Islands is scarce—particularly fee-simple land on Oahu that is suitable for urban use. Major reasons for this short supply are the policy of many large landholders not to sell their holdings and the unwillingness of agricultural users to release land for urban use. High land prices have been the result. In suburban areas up to 12 miles from the center of Honolulu, feesimple homesites sold from 75 cents to 1.25 dollars a square foot in 1957. Many homes, commercial buildings, and industrial installations therefore have been built on leased land.

Urban leasing practices have been improving. Leases for homesites, which formerly ran mostly for 30 years, now are often made for 50 years or more and permit the removal of improvements at the expiration of the lease.

In contrast to the expanding population on Oahu, the number of people living on the other Islands was smaller in 1958 than in 1930. The decline was caused primarily by the mechanization of plantation operations, which forced some residents to seek employment elsewhere.

Land on these other Islands is used mainly for agriculture and forest and water reserves. Cities are generally small, and urban development has been slow compared to Oahu. Hilo, the largest city on the outside Islands, had about 25 thousand inhabitants in 1958.

The location of more industry on Islands other than Oahu might well be encouraged. Such a policy would retard the rate of urban development on Oahu and at the same time strengthen the economy of the outlying Islands. On Oahu, it would tend to reduce the upward pressure on land prices, permit the retention of more valuable agriculture, and allow the use of more land for recreational purposes and scenic reserves. Relocation of some military establishments from Oahu to the other Islands would have similar effects.

Land-use Plans existed for several areas in the Islands in 1957. Some private landowners had prepared such plans for both the agricultural and urban development of their lands.

The City Planning Commission of Honolulu had adopted a master plan for future land use, including the location of proposed schools, parks, and other community facilities and major thoroughfares. Plans for several other urban areas, on Oahu and the other Islands, had been made or were under study.

The Armed Forces and the National Park Service had prepared plans for the areas under their jurisdiction, but no comprehensive plan had been made for the best use of public land administered by the Territorial Government.

There existed no basic land policy or land utilization guide for the Territory as a whole in 1957, although modern communication and transportation had brought the several Islands closer

together. Practically all interisland travel and transportation of some commodities is by air. An air trip between Honolulu and the most distant airport on the outlying Islands now takes little more than an hour.

The territorial legislature in 1957 created the Territorial Planning Office, headed by a director of territorial planning. He was given the task of preparing a long-range, comprehensive plan to serve as a guide for the future physical and economic development of the Territory. The plan is to include a statement of development objectives dealing with land use and such topics as population density, transportation, and public facilities.

The director was instructed by law to consider the following projects: The reclamation of submerged reefs by creating offshore islands; the return of certain military lands to civilian use; the need for and location of industrial sites and public buildings; the economic feasibility of establishing water sources and systems for underdeveloped or arid areas; and the economics of a further development of land, air, and water transportation between and across the various islands of the Territory. The director was instructed also-in cooperation with Government agencies on all levels—to plan a comprehensive system of parks and recreational facilities throughout Hawaii.

The director is to guide and integrate the planning work of Territorial agencies and may assist in similar work of local bodies. The Governor of Hawaii is primarily responsible for coordinating the activities of the several agencies of the Territory within the framework of the general plan.

The director is required to prepare the general plan of the Territory in sections, one for each county. A county plan (or amendments to it) is to become effective only when enacted by a county ordinance. The director does not have the power to zone or control subdivision development. Those responsibilities belong to the counties.